# *Yixianosaurus*

***Yixianosaurus*** (meaning "Yixian lizard") is a maniraptoran theropod dinosaur genus from the Early Cretaceous of China.

The type species, *Yixianosaurus longimanus*, was formally named and described by Xu Xing and Wang Xiaolin in 2003. Its partial skeleton was discovered in 2001, in Liaoning at Wangjiagou in northeastern China. The generic name refers to the Yixian Formation. The specific name means "with a long hand" from Latin *longus*, "long", and *manus*, "hand".[1]

***Yixianosaurus***

**Temporal range: Early Cretaceous, 122 Ma**

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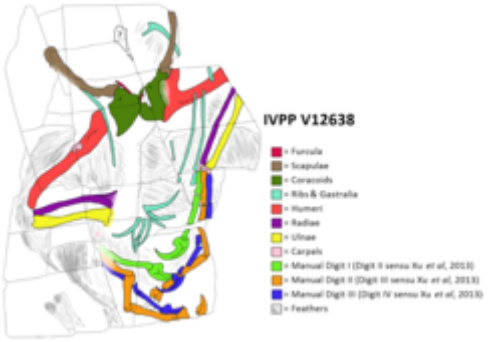



A diagram of preserved elements of IVPP V12638

| Scientific classification | |
|---|---|
| Kingdom: | Animalia |
| Phylum: | Chordata |
| *Clade*: | Dinosauria |
| *Clade*: | Saurischia |
| *Clade*: | Theropoda |
| Family: | †Anchiornithidae |
| Genus: | †*Yixianosaurus* Xu & Wang, 2003 |
| Species: | †***Y. longimanus*** |
| **Binomial name** | |
| †***Yixianosaurus longimanus*** Xu & Wang, 2003 | |

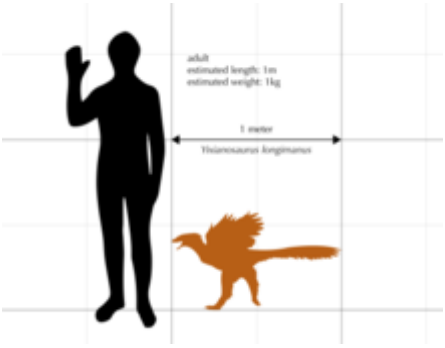
## Description

Reconstruction of *Yixianosaurus longimanus* as an anchiornithid based on IVPP V12638 and fossils of close relatives

*Yixianosaurus* is known only from a single specimen, holotype **IVPP V12638**, which likely derived from the Dawangzhangzi Bed (early Aptian stage, 122 million years ago).[2] It is a compression fossil, viewed from behind and preserved on a single slab that has been sawed into several pieces. It consists of the shoulder girdle and a pair of fossilized arms complete with fossilized feathers, some ribs, and gastralia. *Yixianosaurus* has a very long hand, 140% of the length of the 89 millimeter (3.5 in) humerus. The second finger is the longest. The fingers bear large and recurved claws. The feathers are not preserved well enough to show a specific structure, but they appear similar to the contour feathers of some Yixian Formation birds.[1] The large hands could have served in catching prey or assisted in climbing. The total body length has been estimated at 1 meter (3.3 ft), the weight at 1 kilogram (2.2 lbs).[3] Xu et al. (2013) suggested that the presence of large pennaceous feathers on parts of the forelimb strongly supports that *Yixianosaurus* was adapted for limited aerial locomotion.[4]

## Classification

The describers considered the exact placement of *Yixianosaurus* within Maniraptora to be uncertain, but because the hand length resembled that of another feathered dinosaur, *Epidendrosaurus* (now *Scansoriopteryx*), they suggested it was a close relative of the Scansoriopterygidae. Other researchers have suggested the specimen may have come from a dromaeosaurid. Subsequent analyses were divided on whether




Size comparison between an adult *Y. longimanus* and the average human adult male

is it is more primitive and outside the clade Eumaniraptora – this would mean that advanced characteristics such as the long hands and short arms evolved independently in this species[5] – or a basal member of the more advanced Paraves.[4] In a 2017 re-evaluation of the Harlem *Archaeopteryx* specimen as an anchiornithid called *Ostromia*, *Yixianosaurus* is found to be the most basal paravian.[6] However, two other studies published the same year argued that *Yixianosaurus* was most closely related to *Xiaotingia*, with both genera being either relatives of scansoriopterygids[7] or anchiornithids.[8]

# References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